

21/3,K/1 (Item 1 from file: 275)
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02523341 SUPPLIER NUMBER: 76734581 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Itanium Arrives, Vendors Plan Big -- HP, IBM and Unisys are among the first
to build around the first generation of IA-64 chips. (Product Information)
Bucholtz, Chris
VARbusiness, 47
July 23, 2001
ISSN: 0894-5802 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1058 LINE COUNT: 00083

... will depend on how quickly software developers embrace 64-bit
computing and create applications tuned to take advantage of the improved
performance Itanium promises.

Intel **predicts** software makers will announce between 20 to 60
applications in the first few months after Itanium's arrival as a
commercial product. Before the end...

...there should be some 400 Itanium-optimized applications.

Itanium's Family Tree

Itanium is a family of processors that will be built around the
Explicitly **Parallel** Instruction Computing (EPIC) technology. Intel and
Hewlett-Packard have announced plans for four generations of the CPU, with
more to come in the future.

- MERCED...

...samples). Starts at an 800-MHz clock speed with a 128-bit bus, providing
a peak bandwidth of 3.2 Gbps. Includes a three-level **cache**, adding a
Level 0 cache. In addition, 2 MB to 4 MB of **Level 2 cache** is
included.

- MCKINLEY To arrive in the second half of 2001. McKinley's clock
speed will likely start at over 1 GHz, roughly doubling Merced...

21/3,K/2 (Item 2 from file: 275)
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02222437 SUPPLIER NUMBER: 21168492 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Toshiba puts its 266-MHz Portege 7000CT on a diet. (Toshiba America
Information Systems Inc) (Product Information)
Murray, Bill
Government Computer News, v17, n31, p43(1)
Sept 21, 1998
ISSN: 0738-4300 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 337 LINE COUNT: 00028

TEXT:

...notebook computer to one-inch thickness and 4 pounds in weight. The
Portege 7000CT comes standard with 266-MHz Mobile Pentium II processor, 32M
of **synchronous** dynamic RAM, 512K of **Level 2 cache**, 4.3G hard drive,
56-Kbps modem, 12.1-inch active-matrix display and Microsoft Windows 95 or
Windows 98. An optional expansion dock has a built-in floppy drive,
integrated 10 /100-Mbps Ethernet adapter and 24X CD-ROM drive. Toshiba
plans up to 5,800 possible configurations for its new Tecra 8000 notebook.
Starting with...

...configuration CD-ROM to show buyers all the choices. A third notebook,
the Satellite 4000, has a 233-MHz Mobile Pentium II processor, 512K of
Level 2 cache, 4.1G hard drive, 56-Kbps modem and 24X CD-ROM drive.
Buyers have a choice of active matrix or dual-scan 12.1-inch displays.
Toshiba has **predicted** about 2 1/2 hours of battery operation for the
Portege 7000CT. Both the Portege 7000CT and the Tecra 8000 will accept
Intel Corp.'s...

21/3,K/3 (Item 3 from file: 275)
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02208820 SUPPLIER NUMBER: 21027759 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Dell Precision 610 zips along at Xeon speeds. (Hardware Review) (Evaluation)
Cheek, Michael
Government Computer News, v17, n25, p1(1)
August 10, 1998
DOCUMENT TYPE: Evaluation ISSN: 0738-4300 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 310 LINE COUNT: 00068

... Inc., Silicon Graphics Inc. and other workstation makers.
in the lab's tests. the 400-MHz Xeon with 512K of
error-correcting-code Level 2 **cache** edged an average 400-MHz Pentium II
with 512K of synchronous dynamic RAM by about 3 1/2 percent in math
benchmarks. In heavy-cache...

...The people represent the processes the computer performs.
Every amusement park has a featured ride, usually the roller coaster.
Xeon represents this speed demon. L2 **cache** is the long line in which
visitors stand, like processes waiting to get into the Xeon.
Level 1 **cache**, which is far smaller than L2, amounts to 32K in a
Pentium II. It's analogous to the front of the queue, where the visitors-or
processes-separate to be seated on the roller coaster. At each tick of the
clock, the processes hop on board to take their ride through the processor.
L2 **cache** used to operate at the same speed as the motherboard. For
example, in a standard Pentium II with the 100-MHz BX chip, the L2 **cache**
ran at 100 MHz. But the processor was whisking processes from the L1
cache at 400 MHz, while the L2 **cache** line was advancing at only
one-quarter of that speed. A slight bottleneck developed.
The Xeon's L2 **cache** on the GX chip operates at 400 MHz, the same
speed as the processor and L1 **cache**. So all the processes are in
lockstep, and the line for the roller coaster moves four times as fast.
The Xeon's performance gains look...

21/3,K/4 (Item 4 from file: 275)
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02207854 SUPPLIER NUMBER: 18874647 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Intel, rivals reveal chip changes that target multimedia. (Advanced Micro
Devices, Cyrix tip future at Microprocess Forum trade show) (Industry
Trend or Event)**
Caton, Michael
PC Week, v13, n46, p113(2)
Nov 18, 1996
ISSN: 0740-1604 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1084 LINE COUNT: 00084

... point registers. The M2 has a latency of two clock cycles but is
fully pipelined, allowing it to complete an operation every clock cycle
when **cache** hits are successful.
Floating-point performance was a major shortcoming of the 6x86
relative to the Pentium. With the M2, Cyrix is making improvements,
including giving the FPU a dedicated bus to the **cache** to avoid the FPU
stalls that occurred with the 6x86 when the bus interface and FPU accessed
cache simultaneously.
Cyrix also has enhanced its TLB (translation lookaside buffer) design
by departing from the single 128-entry TLB on its 6x86 to a two-level
TLB on the M2. The M2's L1 TLB is small at 16-entry but is direct-mapped.
The small TLB helps improve performance by eliminating a pipeline stage for
address translation. Backing up the L1 TLB is a six-way set associative,
64-entry TLB. Branch **prediction** is also improved by increasing the BTB
(branch target buffer) from the 6x86's 256-entry BTB to a 512-entry BTB.

Intel also has...

21/3,K/5 (Item 5 from file: 275)
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007597 SUPPLIER NUMBER: 18807044 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Cyrix doubles 6x86 performance with M2. (Cyrix M2 microprocessor) (Product Development)
Slater, Michael
Microprocessor Report, v10, n14, p23(3)
Oct 28, 1996
ISSN: 0899-9341 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 2328 LINE COUNT: 00176

... cache instead of sharing the data path with the bus interface unit. In the 6x86, the FPU stalled if the bus interface was accessing the **cache** when the FPU request occurred; in the M2, both can access it concurrently.

The other change in the memory system is inside the memory-management unit. Cyrix's designers expected that the 128-entry TLB in the 6x86 would become a clock-speed limiter at higher frequencies. At the same **time**, traces of applications showed that TLB miss rates increased with 32-bit applications, making an even better hit rate important.

To achieve this goal, the M2 uses a **two - level** TLB. The relatively small, 16-entry **level - one** TLB is direct mapped to support high clock rates. It is backed by a 384-entry, six-way set-associative **level - two** TLB. The fast **level - one** TLB (with an estimated 92% hit rate) avoids the need for another pipeline stage for address translation during most accesses. When misses in the **level - one** TLB occur, an estimated 99.6% of accesses will hit in the **level - two** TLB and incur only a one-cycle penalty. Both TLBs are dual-ported to support both program and data address translations **concurrently**.

Few Core Enhancements

To reduce the number of stalls due to mispredicted branches, the number of entries in the branch target **cache** and branch **history** table were doubled; each now has 512 entries. The organization and algorithms remain unchanged.

The pipeline is nearly identical to that in the 6x86, with...

21/3,K/6 (Item 6 from file: 275)
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01888395 SUPPLIER NUMBER: 17773974 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Mother, what a board! (PC motherboard design) (Hex, Bugs & Rock 'n Roll) (Column) (Tutorial)
Schuytema, Paul C.
Computer Gaming World, n137, p392(5)
Dec, 1995
DOCUMENT TYPE: Column Tutorial ISSN: 0744-6667 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 2657 LINE COUNT: 00193

... the pretzel representing the "0" or off value. Throw the switch, and the electrons romp through the other loop for the "1" or on value.

Cache memory serves as a "holding pool" for memory and instructions which are in frequent use by the processor. Programming code (in it's most primitive, machine code manifestation) is transferred from regular memory into the **cache** memory. That allows the Pentium chip to access, and hence execute, the instructions very quickly. Often, many motherboards rely on what's called a "**level 1**" **cache**, which is a small amount of memory built into the Pentium chip. (There are actually two 8K **caches**, one for code and one for data.) High-performance motherboards utilize a "**level 2**" **cache**, which is an external memory source like we have here. Generally, the larger the **level 2 cache**, the better, but it's hard to **predict**

what the absolute increase in speed will be, since it depends on the mix of machine level instructions encountered in the current program.

This motherboard sports 256K of speedy NEC 8-nanosecond (that's eight-millionths of a second access time, as opposed to 70 nanoseconds for your main RAM) **synchronous** SRAM. The cache memory is **synchronous** in that the 256K of cache memory runs at the same speed as the Pentium's internal caches, offering up heinous performance.

The square chips...

21/3,K/7 (Item 7 from file: 275)
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01874039 SUPPLIER NUMBER: 17610694 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Integrated PA-7300LC powers HP midrange. (includes related articles on price and availability and on PA-8000 RISC chip) (Product Announcement)
Gwenap, Linley
Microprocessor Report, v9, n15, p12(4)
Nov 13, 1995
DOCUMENT TYPE: Product Announcement ISSN: 0899-9341 LANGUAGE:
English RECORD TYPE: Fulltext
WORD COUNT: 3016 LINE COUNT: 00223

... doubling the bandwidth to memory without increasing the pin count. The single bus also allows main-memory data to be stored directly into the L2 **cache** as it is bypassed into the CPU. The downside is the small cost of the external switches and the need to implement a 128-bit-wide DRAM array.

If there is no other memory activity in progress, the CPU sends an address to the main memory at the **same time** that it is broadcast to the L2 **cache** (if present), minimizing DRAM latency. If the access misses the L2 **cache**, the DRAM's row-access (RAS) time is already **past**; the DRAM access is then completed by asserting CAS.

With 60-ns fast-page-mode DRAM, the CPU stalls for only 14 cycles on an L1 **cache** miss (16 if there is an L2 **cache**, because RAS must be delayed until the L2 miss is detected). Because of the nonblocking **cache**, some of this latency can be hidden if the requested data is not immediately required by another instruction. With the 128-bit bus, it takes only two accesses to fill an L1 **cache** line, for a total of 22 (or 24) cycles.

The memory controller is quite flexible in its timing, allowing it to support a variety of...

21/3,K/8 (Item 8 from file: 275)
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01870909 SUPPLIER NUMBER: 17810024 (USE FORMAT 7 OR 9 FOR FULL TEXT)
NexGen adds FPU for 586s. (Nx586-Pf100 microprocessor) (Product Announcement)
Electronic News (1991), v41, n2091, p72(1)
Nov 13, 1995
DOCUMENT TYPE: Product Announcement ISSN: 1061-6624 LANGUAGE:
English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 363 LINE COUNT: 00034

... the Nx586 processor with FPU offers superior performance and value."

The floating point unit is integrated into the Nx586's RISC86 micro architecture allowing full **parallel** operation of floating point operations. The floating point versions of the MPU are packaged as multi-chip modules (MCMs) utilizing IBM's flip-chip packaging...

...to the x86 instruction set, as well as incorporating the computer architecture techniques of out-of-order executive, speculative execution, register renaming, data forwarding and **two - level branch prediction**.

The new processors also continue to incorporate 32 kilobytes of **level one cache** and an on-chip **level - 2 cache** controller with a private 64-bit **level - 2 cache** bus.

The Nx586-Pf100 processor is sampling now with production availability slated for December, priced at \$285 each in quantities of 1,000. The Nx586

21/3,K/9 (Item 9 from file: 275)
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01832388 SUPPLIER NUMBER: 17378379 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Exploring the frontiers with Intel's P6 Developer's Kit.
Nicolaisen, Nancy
Computer Shopper, v15, n10, p590(2)
Oct, 1995
ISSN: 0886-0556 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2554 LINE COUNT: 00208

...ABSTRACT: for multimedia authoring, full-motion video and advanced 3-D graphics. It owes its performance to the Dynamic Execution architecture, which makes it both highly **parallel** and compatible with previous generations of x86 processors. Dynamic Execution combines 'speculative' out-of-order execution, register renaming, data-flow analysis and multiple branch **prediction** techniques to eliminate idle time. A detailed technical description of how these techniques work is presented. The new chip also uses a built-in, 'non-blocking' **Level 2 cache** in addition to the **Level 1 cache** found in the 486 and Pentium. Programmers should employ such strategies as partial stall removal, data alignment and improved branch **prediction** to optimize their code for the P6. A P6 compiler must support all of these techniques to be effective.

21/3,K/10 (Item 10 from file: 275)
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01615896 SUPPLIER NUMBER: 14358438 (USE FORMAT 7 OR 9 FOR FULL TEXT)
TFP designed for tremendous floating point. (MIPS Technologies Inc.'s TFP microprocessor) (includes related article on pricing and availability)
(Product Announcement)
Gwennap, Linley
Microprocessor Report, v7, n11, p9(5)
August 23, 1993
DOCUMENT TYPE: Product Announcement ISSN: 0899-9341 LANGUAGE:
ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 3781 LINE COUNT: 00283

... pipeline but rearranges the stages to reduce the load-use penalty. As this reordering increases the mispredicted-branch penalty, the chip uses a large branch- **prediction cache** to reduce the number of mispredicted branches.

The off-chip **cache** acts as a large **first - level cache** for floating-point data as well as a **second - level cache** for instructions and integer data. The tag and data SRAMs are interleaved, allowing the processor to reach its bandwidth goal. The **cache** requires custom tag RAMs and uses **synchronous** SRAMs for the data. Because of the extra expense of the two-chip processor and high-performance **cache**, TFP will not replace the R4400 at the high end of the MIPS family; instead, it will satisfy the need for maximum floating-point...

21/3,K/11 (Item 11 from file: 275)
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01437457 SUPPLIER NUMBER: 10917032 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Dataproducts first to reach PS Level 2: is Level 1 already obsolete? (LZR
960 printer features PostScript Level 2 interpreter) (The Latest Word)
(product announcement)

Seybold Report on Desktop Publishing, v5, n10, p34(1)
June 17, 1991

DOCUMENT TYPE: product announcement ISSN: 0889-9762 LANGUAGE:
ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 457 LINE COUNT: 00035

... RAM; LocalTalk, parallel and serial ports (with automatic polling
that, as with the QMS network printers, allows it to accept input from all
three interfaces **concurrently**); a 250-sheet input tray; a 250-sheet
correct-order output tray and a 30-sheet face-up output tray. Optional
250-sheet cassette and...

...provides automatic halftoning of CMYK color values, thereby eliminating
the need to emulate color in the application software. (For a more complete
discussion of Level 2 and its benefits, see Vol. 5, No. 7.)

Adobe has consistently argued that **Level 2** enhancements don't
render Level 1 machines obsolete--indeed, Adobe has hinted that it
intends to provide new drivers that will bring some of the benefits of
Level 2 machines to **Level 1** printers.

We don't buy this argument. We believe that **Level 2** will be
viewed by the market as the "next rev" of PostScript, which by definition
makes **Level 1** obsolete just as the release of PageMaker 4.0 rendered
PageMaker 3.0 history. Our view received a boost by an ad that ran in...

...That Fits (one of Dataproducts' OEM customers) loudly proclaimed the
arrival of its PostScript 2 printer and, after enumerating the real and
hyped benefits of **Level 2**, declared all **Level 1** products to be
obsolete, useful only as "boat anchors." We rest our case.

21/3,K/12 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
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03323482 Supplier Number: 46832016 (USE FORMAT 7 FOR FULLTEXT)
Cyrix Doubles 6x86 Performance with M2
Microprocessor Report, v10, n14, pN/A
Oct 28, 1996
Language: English Record Type: Fulltext
Document Type: Newsletter; Refereed; Trade
Word Count: 2164

... stage for address translation during most accesses. When misses in
the level-one TLB occur, an estimated 99.6% of accesses will hit in the
level - two TLB and incur only a one-cycle penalty. Both TLBs are
dual-ported to support both program and data address translations
concurrently.

few Core Enhancements

To reduce the number of stalls due to mispredicted branches, the
number of entries in the branch target **cache** and branch **history** table
were doubled; each now has 512 entries. The organization and algorithms
remain unchanged.

The pipeline is nearly identical to that in the 6x86, with...

21/3,K/13 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05395635 Supplier Number: 50356536 (USE FORMAT 7 FOR FULLTEXT)
Single-slot VMEbus is K6-compatible
Electronics Times, p54
Dec 1, 1997
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade

Word Count: 308

... VS SBC/PKx allows high performance realtime applications to exploit the capabilities of the K6. The K6 boasts integrated MMX technology capability, enlarged 64Kbyte local (L1) **cache** , out-of-order execution, dual pipelines, branch **prediction** and other advanced technologies all of which enhance the board's performance. In addition, the VS SBC/PKx offers users a number of interfaces with...

...Operating Systems such as VxWorks, Windows 95 and Windows NT are supported.

The K6 CPU is supported by 512Kbytes of very fast, 64bit wide, secondary (L2) **cache** using **synchronous** burst SRAMs. Up to 128Mbytes of 64bit wide EDO-DRAM can be installed on the board using industry standard simms. Up to 1Mbyte of Flash...

...bios.

An Ultra-SCSI, SCSI-2 or SCSI-1 interface is provided using the Symbios Logic 33MHz 53C860 SCSI processor.

The interface supports single-ended **synchronous** or **synchronous** transfers with active termination and signal negation - data rates up to 20Mbytes/sec are supported. The interface is accessed via the P2 DIN connector.

The...

21/3,K/14 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05233420 Supplier Number: 47980272 (USE FORMAT 7 FOR FULLTEXT)

Kayak is more like a speedboat with dual Pentium IIs

Kvitka, Andre

InfoWorld, p121

Sept 15, 1997

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Page Count: 536

... workstation will serve you well.

Technology analyst Andre Kvitka (andre.kvitka@infoworld.com) has been a hardware junkie at the InfoWorld Test Center for the **past** eight years.

Kayak system configuration

- * Two 300-MHz Intel Pentium II CPUs

- * 32KB of **Level 1** **cache** per CPU

- * 512KB of **Level 2** **cache** per CPU

- * 64MB of **synchronous** DRAM (expandable to 512MB)

- * Adaptec AIC-7880 Wide Ultra SCSI interface

- * Adaptec AIC-7860 Narrow Ultra SCSI interface

- * Adaptec ARO-1130 SCSI accelerator, RAID controller with 16MB of

cache

- * Two 4.55GB Seagate Cheetah 4LP ST-34501W 10,000-rpm SCSI drives

- * RAID **Level 0**

- * 24x IDE CD-ROM drive

- * 1.44MB, 3.5-inch floppy drive

- * Matrox MGA Millenium II with Accelerated Graphics Port (AGP)

graphics accelerator with 8MB...

21/3,K/15 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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04688343 Supplier Number: 46900629 (USE FORMAT 7 FOR FULLTEXT)

Intel, rivals reveal chip changes that target multimedia

PC Week, p113

Nov 18, 1996

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Tabloid; General Trade

Word Count: 1012

... point registers. The M2 has a latency of two clock cycles but is fully pipelined, allowing it to complete an operation every clock cycle when **cache** hits are successful.

Floating-point performance was a major shortcoming of the 6x86 relative to the Pentium. With the M2, Cyrix is making improvements, including giving the FPU a dedicated bus to the **cache** to avoid the FPU stalls that occurred with the 6x86 when the bus interface and FPU accessed **cache** **simultaneously**.

Cyrix also has enhanced its TLB (translation lookaside buffer) design by departing from the single 128-entry TLB on its 6x86 to a **two - level** TLB on the M2. The M2's **L1** TLB is small at 16-entry but is direct-mapped. The small TLB helps improve performance by eliminating a pipeline stage for address translation. Backing up the **L1** TLB is a six-way set associative, 384-entry TLB. Branch **prediction** is also improved by increasing the BTB (branch target buffer) from the 6x86's 256-entry BTB to a 512-entry BTB.

Intel also has...

21/3,K/16 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
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10451652 SUPPLIER NUMBER: 21114725 (USE FORMAT 7 OR 9 FOR FULL TEXT)
RISC And CISC Processors Compete For Embedded Applications.
Bursky, Dave
Electronic Design, v46, n19, p83(1)
August 17, 1998
ISSN: 0013-4872 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 4191 LINE COUNT: 00335

... Integrated Device Technology also has several RC5000-series devices in its family. Like the NEC VR5000, the chips include dual 32-kbyte instruction and data **caches**, a dual-issue floating-point ALU, and a five-stage pipeline. The peak clock rates and thus, MIPS throughput, though, are higher than the NEC...

...internal top clock frequencies of 250 MHz, the Toshiba TC86R4400 delivers a raw throughput of between 300 and 350 MIPS. Direct-mapped instruction and data **caches** of 16 kbytes each tie into the external **L2 cache** over a 128-bit-wide bus, which supports fast line refills. An on-chip memory-management unit employs a fully associative translation-look-aside buffer...
...unit, designers at IBM and Motorola have developed the MPC750/740 processors. These CPUs can issue two or more instructions every cycle. They pack large **L1** instruction and data **caches** --32 kbytes each--and are eight-way set associative. When clocked at 266 MHz, the design can deliver a throughput of well over 300 MIPS. To get the high throughput, four instructions are **simultaneously** fetched from the instruction cache. Meanwhile, dual instructions are fetched from the branch-target instruction cache. The processor performs speculative execution with dynamic **prediction**. To improve the response to branches, they are processed upstream of the dispatch unit.

Prior to the 750/740, IBM and Motorola did enhance the...

21/3,K/17 (Item 2 from file: 148)
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09865460 SUPPLIER NUMBER: 19983069 (USE FORMAT 7 OR 9 FOR FULL TEXT)
IBM, Compaq PCs step into the workstation market. (IBM's IntelliStation M Pro and Compaq's Professional Workstation 5100 Pentium II-based systems) (includes a related article on new hardware terminology) (Hardware Review) (Evaluation)
Kvitka, Andre
InfoWorld, v19, n45, p148(1)

Nov 10, 1997

DOCUMENT TYPE: Evaluation ISSN: 0199-6649 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1234 LINE COUNT: 00105

... kvitka@infoworld.com) has been a hardware junkie at the InfoWorld Test Center for the **past** eight years.

IBM system configuration

- * Two 300-MHz Intel Pentium II CPUs
- * 32KB of Level 1 **cache** per CPU
- * 512KB of Level 2 **cache** per CPU
- * 64MB of **synchronous** DRAM, expandable to 512MB
- * Dual-channel Wide Ultra SCSI controller
- * RAIDport option for RAID Level 0, 1 or 5
- * IBM Scorpion 4.5GB 7200-rpm Wide SCSI hard drive
- * Sony 24-speed IDE CD-ROM drive
- * Permedia P2 video card with 8MB...

...NetMeeting, IBM VoiceType Simple Speaking Gold and LANClient Configuration Manager, Lotus SmartSuite, NetFinity

Compaq system configuration

- * Two 300-MHz Intel Pentium II CPUs
- * 32KB of Level 1 **cache** per CPU
- * 512KB of Level 2 **cache** per CPU
- * 64MB EDO error-correcting code buffered DIMMs (expandable to 512MB)
- * Wide Ultra SCSI host controller
- * 4.3GB Wide Ultra SCSI 7200-rpm SMART...

21/3,K/18 (Item 3 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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07714246 SUPPLIER NUMBER: 16683452 (USE FORMAT 7 OR 9 FOR FULL TEXT)

P6 attacks Pentium's performance critics. (Intel Corp. microprocessor)

McLeod, Jonah

Electronics, v68, n4, p7(1)

Feb 27, 1995

ISSN: 0883-4989 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 266 LINE COUNT: 00019

... Intel's P6 marketing director, said the 32-bit dataflow engine has the latest architectural features: out-of-order and speculative execution and improved branch **prediction**.

Feeding this microengine is an 8-kbyte two-way instruction and 8-kbyte four-way set associative L1 **cache**. In addition, a 256-kbyte L2 **cache** is mounted on the same ceramic substrate as the P6 CPU, and both are contained in the same package. Intel says combining the L2 **cache** with the CPU ensures the highest performance and fastest time to market.

The L2 **cache** is on its own dedicated bus to the P6, thus allowing a fast 1-Gbyte per second transfer rate. Main memory and PCI (peripheral component...

...O are on a separate 500-Mbyte/s 64-bit data and 36-bit address transaction-based bus. Intel claims the bus can accommodate 200 **concurrent** 5-Mbit/s videostreams without affecting CPU performance. One other feature of the P6 is that the CPU, L2 **cache** and memory bus are all non-blocking.

21/3,K/19 (Item 1 from file: 647)

DIALOG(R)File 647:CMP Computer Fulltext

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01240394 CMP ACCESSION NUMBER: VAR20010723S0021

Itanium Arrives, Vendors Plan Big - HP, IBM and Unisys are among the first to build around the first generation of IA-64 chips

CHRIS BUCHOLTZ

VARBUSINESS, 2001, n 1715, PG47

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JOURNAL CODE: VAR LANGUAGE: English
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SECTION HEADING: TECHNOLOGY
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... will depend on how quickly software developers embrace 64-bit computing and create applications tuned to take advantage of the improved performance Itanium promises.

Intel **predicts** software makers will announce between 20 to 60 applications in the first few months after Itanium's arrival as a commercial product. Before the end...

...there should be some 400 Itanium-optimized applications.

--

Itanium's Family Tree

Itanium is a family of processors that will be built around the Explicitly **Parallel** Instruction Computing (EPIC) technology. Intel and Hewlett-Packard have announced plans for four generations of the CPU, with more to come in the future.

- MFRCED...

...samples). Starts at an 800-MHz clock speed with a 128-bit bus, providing a peak bandwidth of 3.2 Gbps. Includes a three-level **cache**, adding a **Level 0 cache**. In addition, 2 MB to 4 MB of **Level 2 cache** is included.

- MCKINLEY To arrive in the second half of 2001. McKinley's clock speed will likely start at over 1 GHz, roughly doubling Merced...

21/3,K/20 (Item 2 from file: 647)
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Here's what 20 top-selling PCs have to offer

Richard Fisco

HOME PC, 1997, n 412, PG151

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JOURNAL CODE: HPC LANGUAGE: English

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SECTION HEADING: HomePC Lab Report-Putting products to the test

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... and Pentium Pro CPUs, and then some. Like the former, it has the instruction set for accelerating MMX software, as well as 32 KB of **L1 (Level 1) cache** memory, up from 16 KB in earlier chips; **cache** memory "looks ahead" to the next lines of program code, speeding up MMX and non-MMX applications alike.

But like the Pentium Pro chip, the PII separates the bus on which the **L2 cache** memory resides (**L2 cache** is where the processor turns after the **L1 cache** for the next sequential bits of program code) from the system bus, where main memory, or RAM, resides. Thus, the data in the **L2 cache** and the larger chunks of data in main memory can travel **simultaneously** on separate buses, a feature that contributes to greater overall efficiency. Also, the PII doesn't have to finish processing one piece of data before it can start on another, and it has an improved ability to **predict** which of its branches will be working on program instructions, to further smooth data flow.